Interview with Joe Camacho

Joint Knowledge Development and Distribution Capability Program Manager

U.S. Joint Forces Command Joint Training Directorate and Joint Warfighting Center (J7/JWFC) lead joint warfighter capability improvement through joint training. With emphasis on the global war on terrorism and military transformation, the JWFC works to ensure America's military is the most advanced and powerful force in the world.

The JWFC commander serves as the joint force trainer to ensure the fidelity and coordination of the military's overall joint training efforts. From the JWFC facility in Suffolk, Va., the joint force trainer team and its partners revise the content and execution of training, developing advanced technologies and reshaping the overall training environment to better prepare combatant command staffs, joint task forces and the individual services (Army, Navy, Air Force, Marines and Coast Guard) to fight as a collaborative team, or a joint force. This transformation in training is a critical success factor for not only U.S. forces, but also for our multinational partners in NATO and Partnership for Peace programs.

CHIPS asked Mr. Joe Camacho, program manager for the Joint Knowledge Development and Distribution Capability to discuss how his program prepares warfighters for the many and varied missions that the U.S. military performs today. CHIPS spoke with Mr. Camacho in November 2006.

Mr. Camacho: Our training transformation program in the Department of Defense (DoD) is a new one for JFCOM, and I do appreciate you affording us the opportunity to get our message out and make other people aware of this important program.

The training transformation program has three distinct legs of the stool. Training transformation consists of a collective training piece which is called the Joint National Training Capability. That is the JNTC live, virtual and constructive technologies that afford collective training and joint training across the entire department. The director is Capt. David Frost and the program manager is Mr. Greg Knapp. It is run out of the Joint Forces Command and the Joint Warfighting Center.

The second leg of training transformation is my program, the Joint Knowledge Development and Distribution Capability, JKDDC. JKDDC is individual Web-based training. It is integrated with the Joint National Training Capability because individuals must prepare before going into a collective exercise in order to perform as a group.

The JNTC and the JKDDC are integrated, and we leverage each other's capabilities and technologies, but they are two separate programs.

The third program is the Joint Assessment and Enabling Capability (JAEC), run by the Under Secretary of Defense for Personnel and Readiness and the Joint Staff. Their job is to assess the effectiveness of the JNTC and JKDDC on the joint community.

CHIPS: How do you determine which form of training you are going to use — live, virtual or constructive?

Mr. Camacho: We determine which form of training to use for military and civilians for joint exercises. Nowadays, joint is defined as interagency, intergovernmental, multinational and, of course, across the services. There are several tools that can be used to prepare the audience to engage in the training exercise directly. Modeling and simulation, live forces and constructive simulations can be used.

The Joint National Training Capability uses a balance of those pieces to afford the best and most efficient training in the exercises that they sponsor. The new factor that we bring forward is the JKDDC factor, Web-based individual training in preparation for the exercise that also allows reachback during the exercise.

For example, if you are a participant, three months prior to the exercise, you could get on our Web site, our knowledge portal to prepare you for what your job, and roles and responsibilities will be in the exercise. You could receive training on the special skills you might need. You would have access to research, training courses and content, and chat rooms with other people that may have been in a similar exercise and have real-world experience. You could reach back into other places on the Web to properly prepare you.

Reachback is an important piece. If you can take that concept, move it forward to real-world operations, you could see where the real value is to the operator in the field during integrated operations.

Anybody from anyplace at anytime can get access to the knowledge portals which are based on the Internet — the unclassified NIPRNET and the classified SIPRNET. They can get access in real-time when they are deployed in Afghanistan or Iraq or other parts of the world. It is an important capability that we are working on.

CHIPS: Do you have to be part of a specific program or exercise to use the knowledge portal?

Mr. Camacho: If you are part of the DoD enclave, for example if you are a civilian with a CAC, Common Access Card, or if you are a military person, or anybody else that has been given special permission to enter these enclaves, it is continuously available to you 24 hours a day, seven days a week, 365 days a year.

That is what is key. It is the anytime, anywhere concept, the ability to take advantage of this joint knowledge that is available to you when you need it — not when we are ready to give it to you. That is a totally different approach, a transformational approach to providing value to the warfighter.

CHIPS: Can you provide a profile of your typical user?

Mr. Camacho: Members of a combatant commander's staff; members of a joint task force staff; individual augmentees that are being deployed around the globe; functional component staffs that the services have; joint and service school students; individual service members; interagency and intergovernmental people; multinational partners; combat support agencies; the National Guard Bureau; Reserves; industry; academia; government contractors; and anybody else inside the DoD enclave can be given access to one of our three knowledge portals to receive this training and information.

CHIPS: How many people are using the system at any one time?

Mr. Camacho: We have just inherited the program. We transitioned it from the Joint Staff over the last year, and we have just gotten our plan approved for execution in October. We have just begun to build the new system. Everything I have been talking about is part of our execution plan, approved and funded for fiscal year 2007. We are busily building the Web sites and the knowledge portals and getting the servers in place.

The program that we inherited has about 77 training courses available on the Web site, and we do not have a way to track users currently. All the things I have been talking about are in our implementation plan for execution in fiscal year 2007.

CHIPS: You specified that the portal is Web-based. Can you talk about the technology behind it?

Mr. Camacho: Initially, Web-based training courses were provided through advanced distributed learning. These courses were static where a user could read an electronic version of a book with some interaction.

Now the technology is advanced beyond that. We have interactive advanced distributed courseware that engages directly with the user. The user can ask questions. The user can stop in the middle of the course and come back the next day and pick up where he or she left off.

There are self-administered tests to determine if the user has achieved the training objectives. There is other content available in knowledge portal services. People may not want to take a training course. They may just want access to certain information or read articles. They may want to engage in a chat room, or in a Web-based or desktop video teleconference with some other subject matter experts.

All of these technologies are going to be available through the knowledge portal through the JKDDC program. It is a more sophisticated way for users to get the information they need, but to the user — it is seamless, transparent and convenient.

CHIPS: You mentioned the flexibility of the system. How quickly can you make a change if there is a new policy directive?

Mr. Camacho: Depends what the product is. For example, if you want to make a training course on a hot topic, we could generate one of those as quickly as six weeks, maybe even four, depending on the format and the subject matter expert's availability.

In the last 18 months trafficking in human beings became a secretary level interest item, and the secretary wanted everyone to receive awareness training of what was happening across the globe. Advanced distributed learning courses were developed and made available on the Web across the globe to DoD personnel in probably a two-month time period, an impressive achievement considering all the people that have been trained by that particular Web-based training module.

CHIPS: How do you work with your stakeholders — the unified commands, OSD and the other partners in your program?

Mr. Camacho: We operate the JKDDC program. JFCOM is the implementing agent for DoD. We engage in the T2 Business Model — the Training Transformation Business Model. It is a process by which we bring together all of the stakeholders, including the combatant commanders and their representatives (typically at the 06 level), the combat support agencies, the services, and other organizations that are on the perimeter.

With me as the facilitator, the stakeholders make recommendations to the T2 governance structure which includes higher-level representatives in a larger forum, the integrated process team and then to the senior advisory group at the two and three-star level and ultimately to the Executive Steering Group, which is at the four-star level. We use an open and collaborative environment in the JKDDC and JNTC, and that is why the programs have been so successful.

It is open, it is transparent, and it is accountable —meaning that we let everybody know what is going on. They are involved in the development of the overall plan which includes the budget.

If there are any changes, we call all the stakeholders back together, and we all make these changes together. It is a consensus model, not everybody gets their way, but everybody is involved in the decision-making process.

CHIPS: In reading about JFCOMS's mandate to be the joint trainer, transformational seemed to be the buzzword. How do you instill that value into your training?

Mr. Camacho: We must transform in the Department of Defense. There is no way that we can use the old mechanism of folks sitting in a classroom with an instructor. For example, if you take the typical training institutions where they train 50 to 100 students every four or five months on a certain topic, that is not nearly enough throughput to cover the Afghanistan, Iraqi and Kosovo type situations that require our military forces to be engaged in immediate, integrated operations.

The way we transform is to provide the maximum amount of appropriate training via the Web. This way you can get anywhere from 10 to 10,000 hits a day on a Web site through a knowledge portal that will provide training to folks whenever and wherever they need it — at their desk, on the job or in the field.

Forces now do not have the time to travel somewhere and sit in a classroom for six weeks. They have to be on the job because of the OPTEMPO (operations tempo) and PERSTEMPO (personnel tempo) that is required to fulfill global requirements.

Training is transformational by definition because we do not do it the old institutionalized way.

That is not to say that the venerated brick and mortar institutions have no value. There are some things that do not lend themselves to Web-based training. We call it 'blended' learning. The balance that we have between the brick and mortar institutions and the Web-based folks (such as myself) has to be determined again in this T2 Business Model where the stakeholders get together and make that determination.

CHIPS: Technology is wonderful, but sometimes you just want to talk to a human being. How easy is it for somebody using your system to talk to a subject matter expert?

Mr. Camacho: Because of the knowledge portal technology, we have a menu of various ways that the user can get information. For example, you can enter the knowledge portal and say I want a specific piece of information. The system will query you if you

Joint Force Trainer Community

USJFCOM's Joint Force Trainer community has a global responsibility for training in support of joint warfighter development. The command works with a broad range of stakeholders including:

- The Office of Secretary of Defense
- The Joint Staff
- The services and unified commands
- Interagency and multinational partners

A key to success is its continued effort to build an interdependent and collaborative atmosphere for broadening and deepening joint context and continuing to ensure joint training is the integrating environment for transformation.

Transforming Training

The Joint National Training Capability (JNTC) serves as the heart of training transformation. This enhanced training capability is one of three focal points in the Secretary of Defense's Training Transformation Plan. It covers the full spectrum of warfighter decision-making — from the strategic and operational — to tactical levels of war.

want to take a course, if you want to read articles, if you would like to see lessons learned, if you would like to see a list of subject matter experts and their contact information — when they are available, where to call or their e-mail addresses. Or a user can enter a chat room and find out who is up.

The portal offers the entire spectrum of choices because we understand that what you have said is right. For example, senior people, historically, like to talk to other senior people. A flag officer in the field that wants to talk about stability reconstruction may want to talk to his old professor at the National Defense University, or a flag officer who retired a few years ago, or a flag officer doing the same thing in another part of the world. Through our JKDDC portal, we have ways to make those connections available to the user. That is in our plan for fiscal year 2007.

We also understand that the younger generation likes to get into blogs, Web sites where everybody is talking to everybody else. This is the way they learn best. They like to play games, and we are offering games as a learning venue.

We are offering the total spectrum, the total menu of different ways that the user can get the information and the knowledge that they need to do their jobs even if it is just to talk to someone else.

CHIPS: Your portal sounds like decision-support technology.

Mr. Camacho: That is one of its key dimensions. It can be used for decision support. It can be used for performance enhancement or mentoring. It can be used for information gathering and lessons learned. It can be used for whatever the user decides he or she needs. It was designed that way.

This is an important program, not for the technology, that clearly is the enabling piece, but at the end of the day it is all about giving the warfighters what they need.

We are operators in JFCOM, and we have operationalized this concept with our plans. Hopefully, in fiscal year 2007, we will be able to deliver to the warfighter a technology-enabled system that will give them what they need to do their jobs better. That is our mission. CHIPS

USJFCOM's New Supercomputer

By Robert Pursell, USJFCOM Public Affairs

The High Performance Computing Modernization Program (HPCMP) recently assigned a supercomputer to U.S. Joint Forces Command (USJFCOM) that will enhance experimentation and training efforts in modeling and simulation.

The supercomputer is much larger and more powerful than the machines used today and will yield finer details when it comes to imaging and behavior at a faster speed.

The supercomputer will be operated mostly by the Joint Training Directorate (J7) and Joint Experimentation Directorate (J9), housed in the Joint Training and Experimentation Center and accessed through the Defense Research and Engineering Network (DREN).

The DREN is an official Department of Defense network specifically designed for computational research, engineering and testing, and is used to transfer leading network and security technologies and capabilities across the DoD and other federal agencies.

Jim Blank, USJFCOM J9 modeling and simulation division chief, explained the command's plan for using the machine.

"There's been a shift in focus, as you can imagine, from rolling deserts and plains to an urban environment," he said. "You can't model an urban environment without modeling the people. That is the most important part of the city."

Tony Cerri, J9's experimentation engineering department head, gave an example of how the supercomputer will affect a simulation of Baghdad.

"In a city like Baghdad, we can say this would be morning rush hour, all of the sudden 500,000 people get up and go to work. That's not something that we've been able to do very well," Cerri said.

Blank discussed the difference between the horsepower of a regular computer versus a supercomputer and how it impacts each individual item (called an "entity") in the simulations.

"It's fidelity versus scale. Typically, as you've increased the number of entities that you put into a simulation, your resolution of any particular entity has gone down because you just can't support a million entities at a constant level of resolution. Our entities have behaviors associated with them. Now we can maintain the full behavior characteristics of the entity as we scale out to a million," Blank said.

"In a previous life, we ran about 32,000 entities at any given time. That was probably the max that we were capable of. With supercomputers, you can run over one million entities, and we've done it," he added.

Blank said the advantage of having a supercomputer housed at USJFCOM will enhance capability and make development much easier.

USJFCOM accomplished this effort with the help of the University of Southern California Information Science Institute, which played a major part in working with the HPCMP to acquire the supercomputer. USJFCOM was negotiating for about a year before it received the final approval.

"They have significant supercomputer experience, and we worked fairly close with them because of their expertise to keep us smart, engaged and in the right direction," Blank said.

For more information, go to http://www.jfcom.mil/about/abt_j7.htm or phone USJFCOM public affairs office at (757) 836-6555. CHIPS